valence in *Coniferæ* having been anywhere noted. In *Podocarpus dacrydioides*, the species selected for illustration, the roots and rootlets are studded at intervals with spherical bodies, of diameters varying between the $\frac{1}{40}$th and $\frac{1}{60}$th of an inch, either attached by a very short pedicel, or absolutely sessile, and sometimes even sunk into the bark of the root. They are easily detached, leaving a small scar, are of a soft and spongy consistence, smooth and even on the surface, of a pale reddish colour, and in a vertical section are seen to be composed of—(1) a mass of spongy cellular tissue, aggregated round (2) a central vascular axis, which extends from the wood of the root to the centre of the sphere, and (3) a delicate cuticle. Each of these tissues is described in detail, and illustrative figures of the exostoses of *P. dacrydioides* and of their microscopic anatomy accompany the paper. With regard to the exostoses of the roots of other plants, Dr. Hooker observes that for the most part their structure is approximately the same as those of the *Podocarpus*, but they are very much larger in most herbaceous plants than in the arboreous, are more irregular in form, and are destitute of the vascular axis. In some species they are perennial, in others annual. In the Laburnum they form fleshy branched masses, as large as the fist, and are full of vascular tissue. Morphologically, he looks upon them as transformed root-fibrils, but regards their special function as obscure, although they may be supposed to be subservient to the office of selection of nutriment. In conclusion, he indicates a remarkable morphological analogy between them and the tubers of the root-parasite *Balanophora*, which are supplied with an abundant development of vascular tissue, mainly derived from the vascular axis of the roots upon which the *Balanophoræ* are parasitical. In this case, Dr. Hooker thinks there can be no doubt that the parasite exerts a specific or diseased action in the root-stock, which results in the development of a vascular bundle analogous to a rootlet, which is prolonged into the tuber of the parasite, and which afterwards increases greatly, branches, and resembles in its appearance as well as in its relation to the root-stock, the vascular branches occupying the axis of the branched exostoses of the Laburnum. On the subject of the development of the tissues of *Balanophoreæ*, however, he reserves further details for a monograph of that Order which he is preparing to lay before the Society.

BOTANICAL SOCIETY OF EDINBURGH.

February 8, 1855.—Professor Balfour, President, in the Chair.

Mr. T. Kirk, of Coventry, sent for exhibition a specimen of *Cerastium triviale*, with the carpellary leaves partially turned inwards, so as to show distinct parietal dissepiments. The placentas were free and central. A very similar specimen is figured and described in the 'Gardener's Chronicle' (1844, p. 557), and 'Lindl. Veg. Kingdom' (p. 497).

The following papers were read :—

1. "Account of a Botanical Excursion to the Braemar Mountains in August 1854," by Prof. Balfour.

The Professor gave an interesting account of his tour with his pupils and friends, and mentioned the localities of several plants observed.

2. "Report on the Diatomaceæ collected in Braemar in the autumn of 1854, by Prof. Balfour and Mr. G. Lawson," by Dr. Greville. (See page 252.)

3. "On the Geological Relations of some rare Alpine Plants," by Dr. Gilchrist.

Oxytropis campestris is a plant confined to a single isolated locality in Clova. It grows on a cliff facing the south, which is somewhat isolated from the surrounding rocks by two perpendicular indentations, which, as they are the result of weathering, indicate some change in the structure or composition of the rocks. That on which the plant grows, and to which it is limited, is a micaceous schist, extremely rich in mica, of a dark colour, and rapidly undergoing decomposition. The immediately surrounding rocks are of the same general character; but the mica is greatly less in proportion to the other materials, and lighter in colour.

Lychnis alpina is confined to a few isolated localities. It grows on the summit of a hill called Little Gilrannoch, at about equal distances from Glens Isla and Dole. It seems limited to about half an acre of surface. The rock is a tabular mass of compound felspar, apparently capable of resisting decomposition. While in many places it is bare and flag-like, other portions of it present a singularly rough and irregular surface, as if the rocks had undergone fusion previous to expulsion, small portions of it bearing a distinct resemblance to similar specimens from the so-called "vitrified forts." The relations of this plant to the rock on which it grows are well seen, many of the specimens growing in little crevices of the bare rock, where there is not the slightest vestige of soil, ordinarily so called. The rock, coextensive with the limits of the plant, is unvaried in character. Its relations to those around could not be ascertained.

Astragalus alpinus grows upon the summit of Craigindal, a hill about 3000 feet in height. To the east of Braemar we gathered specimens of this elegant little plant, in two separate localities, at a considerable distance from each other, but the rocks on which both grew were the same, a very pure compact felspar, of which the entire hill seems to be formed.

4. "Descriptions of new Coniferous Trees from California," by Mr. A. Murraw.

The descriptions were rather horticultural than botanical, and botanists must wait for some accurate and scientific definitions of them, before they can be admitted as described species.